



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/698,592	10/31/2003	John A. Baumann	BO1 - 0196US	1654
60483	7590	08/29/2006	EXAMINER	
LEE & HAYES, PLLC 421 W. RIVERSIDE AVE. SUITE 500 SPOKANE, WA 99201			EDMONDSON, LYNNE RENEE	
			ART UNIT	PAPER NUMBER
			1725	

DATE MAILED: 08/29/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)
	10/698,592	BAUMANN ET AL.
	Examiner Lynne Edmondson	Art Unit 1725

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on 15 June 2006.  
 2a) This action is FINAL.                            2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 1-67 is/are pending in the application.  
 4a) Of the above claim(s) 23-67 is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_\_ is/are allowed.  
 6) Claim(s) 1-22 is/are rejected.  
 7) Claim(s) \_\_\_\_\_ is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on 31 October 2003 is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) Notice of References Cited (PTO-892)  
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)  
 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
 Paper No(s)/Mail Date \_\_\_\_\_

4) Interview Summary (PTO-413)  
 Paper No(s)/Mail Date. \_\_\_\_\_  
 5) Notice of Informal Patent Application (PTO-152)  
 6) Other: \_\_\_\_\_

**DETAILED ACTION**

***Election/Restrictions***

1. Applicant's election without traverse of claims 1-22 in the reply filed on 11/25/05 is acknowledged.

***Claim Objections***

2. Claim 3 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. The work area does not further limit the apparatus.

***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
4. Claims 1-22 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The phrase "configures to be at least partially supported" is not clear. It is not clear whether the device is designed such that the elements can possibly be or are capable of possibly being at least partially supported by fluid or if the elements are at least partially supported by fluid pressure. Appropriate correction is required.

For examination purposes, it is presumed that the elements are capable of being partially supported by fluid.

***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 1-5, 11-13, 16 and 18-22 are rejected under 35 U.S.C. 102(e) as being anticipated by Trapp et al. (USPN

Trapp teaches a clamp for securing a work piece comprising a support arranged to at least partially surround a circumference defining a work area on the work piece, the support having a first movable end and at least one friction reducing element attached to the first end and disposed between the support and the work piece, the friction reducing element applying a clamping pressure to the surface of the work. The clamp is capable of surrounding the work area and a friction stir tool (figures 3, 4, 11 and 12). The friction-reducing element comprises castors, roller or ball bearings (paragraphs 13, 14) which can be at least partially supported by fluid pressure (paragraphs 45 and 46) and a feedback system (paragraphs 10 and 13) for maintaining

a specific pressure. The support mechanism is moved by springs or hydraulics (paragraphs 42 and 43)

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claim 6-10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Trapp et al. (US 2006/0102689 A1) in view of Alber (US 2004/0120783 A1).

Trapp teaches a clamp for securing a work piece comprising a support arranged to at least partially surround a circumference defining a work area on the work piece, the support having a first movable end and at least one friction reducing element attached to the first end and disposed between the support and the work piece, the friction reducing element applying a clamping pressure to the surface of the work. The clamp is capable of surrounding the work area and a friction stir tool (figures 3, 4, 11 and 12). The friction-reducing element comprises castors, roller or ball bearings (paragraphs 13, 14) which can be at least partially supported by fluid pressure (paragraphs 45 and 46) and a feedback system (paragraphs 10 and 13) for maintaining a specific pressure. The support mechanism is moved by springs or hydraulics (paragraphs 42 and 43). However the rollers, ball bearings castors are not further disclosed.

Alber teaches a clamp for securing a work piece comprising a friction-reducing element. The friction reducing element comprises a self-lubricating, MoS<sub>2</sub> material and may comprise PTFE (paragraphs 20-23). A mechanism is provided to move the support and maintain a specific pressure (paragraph 57).

It would have been obvious to one of ordinary skill in the art at the time of the invention to use known friction reducing materials such as Teflon to facilitate smooth rolling and cleaning of the rollers after processing.

9. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Trapp et al. (US 2006/0102689 A1) in view of Vierstraete (USPN 4304512, IDS).

Trapp teaches a clamp for securing a work piece comprising a support arranged to at least partially surround a circumference defining a work area on the work piece, the support having a first movable end and at least one friction reducing element attached to the first end and disposed between the support and the work piece, the friction reducing element applying a clamping pressure to the surface of the work. The clamp is capable of surrounding the work area and a friction stir tool (figures 3, 4, 11 and 12). The friction-reducing element comprises castors, roller or ball bearings (paragraphs 13, 14) which can be at least partially supported by fluid pressure (paragraphs 45 and 46) and a feedback system (paragraphs 10 and 13) for maintaining a specific pressure. The support mechanism is moved by springs or hydraulics (paragraphs 42 and 43). Although rollers, ball bearings and the like are taught (paragraph 14), there is not disclosure of roller bearings.

Vierstraete teaches a clamp for securing a work piece comprising a friction-reducing element. The friction-reducing element comprises a self-lubricating element (col 2 lines 34-41) and ball or roller bearings (col 2 lines 55 – 67 and col 3 line 13 – col 4 line 9).

It would have been obvious to one of ordinary skill in the art at the time of the invention that roller bearings would be an obvious variation of rollers and ball bearings.

***Response to Arguments***

10. Applicant's arguments with respect to claims 1-22 have been considered but are moot in view of the new ground(s) of rejection.

***Allowable Subject Matter***

11. Claims 15 and 17 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

***Conclusion***

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Wassmer (USPN 6832879 B2) and Epstein (US 2004/0048722 A1).

Art Unit: 1725

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lynne Edmondson whose telephone number is (571) 272-1172. The examiner can normally be reached on Monday through Thursday from 6:30 a.m. to 5 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Ryan can be reached on (571) 272-1292. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Lynne Edmondson  
Primary Examiner  
Art Unit 1725



LRE